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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/803,551      | 03/09/2001  | Scott E. Harrow      | 10205.030           | 7317             |

7590

05/08/2003

Paul F. Wille  
6407 East Clinton Street  
Scottsdale, AZ 85254

EXAMINER

SINGH, RAMNANDAN P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2644

DATE MAILED: 05/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

5

**Office Action Summary**

Application No.

09/803,551

Applicant(s)

HARROW ET AL.

Examiner

Ramnandan Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 through 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 claims the method of Claim 1 wherein the comparing step includes “providing a binary indication of the results of the comparison”. Claim 1 includes at least three comparisons in that Claim 1 recites “comparing the signals to each other and to at least one threshold” (i.e., at least two comparisons) and “comparing the first count to at least one count threshold” (i.e., at least one more comparison). It is unclear which of these comparisons is meant by the recitation “the comparison” in Claim 3. For the purpose of this Office action examiner assumes “the comparison” means “the comparison of the first count to the at least one count threshold”.

4. Claims 4 through 6 are indefinite due to dependence on indefinite Claim 3.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1 through 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan (US Patent 5,307,198).

7. Claim 1 claims a method for comparing two electrical signals comprising comparing the signals to each other and to at least one threshold to produce a binary representation of the comparison. Sullivan discloses a signal processor circuit (Fig. 20, reference 152; column 20, lines 42-50) that includes a comparator (Fig. 20, reference 276) that compares two signals (Fig. 20, reference S1, S2) with each other and comparators (Fig. 20, reference 278, 280) that compare these signals with another signal (Fig. 20, reference S3) that corresponds to the threshold claimed to produce a set of Boolean outputs (Fig. 20, reference  $S2 > S1$ ,  $S1 > S2$ ,  $S3 > S2$ ,  $S2 > S3$ ,  $S1 > S3$ ,  $S3 > S1$ ) that are latched by a set of flip-flops (Fig. 20, reference 290, 292, 294, 296, 298, 300) the outputs of which correspond to the binary representation claimed. Claim 1 further claims converting a plurality of binary representations into a first count. Sullivan discloses a flip-flop and logic gate and counter combination (Fig. 20, reference 302, 304, 306, 308, 310) that takes uses the outputs of the flip-flops to control a counter (Fig. 20, reference 312), the count of which corresponds to the first count claimed. Claim 1 further claims comparing the first count to at least one count threshold. Sullivan discloses generation of a new-phase signal (Fig. 20, reference 160; column 23, lines 24-31) only when the count of the counter is at zero (i.e., at least one count threshold), which inherently includes comparing the count to a threshold. Therefore, Sullivan anticipates all elements of Claim 1.

8. Claim 2 claims the method of Claim 1 wherein comparing the signals includes comparing the signals in an analog comparator. As stated above apropos of Claim 1, Sullivan anticipates all elements of that claim. In addition, Sullivan discloses comparing the signals in an analog

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comparator (column 21, lines 12-26). Claim 2 further claims sampling the output of the comparator to produce the binary representation of the comparison. Sullivan discloses flip-flops (Fig. 20, reference 290, 292, 294, 296, 298, 300) that latch (i.e., sample) the set of Boolean outputs of the comparators to produce a set of outputs that corresponds to the binary representation claimed. Therefore, Sullivan anticipates all elements of Claim 2.

9. Claim 3 claims the method of Claim 1 wherein comparing the first count to at least one count threshold includes providing a binary indication of the result of the comparison. As stated above apropos of Claim 1, Sullivan anticipates all elements of that claim. In addition, Sullivan discloses a new-phase signal (Fig. 20, reference 160; column 23, lines 24-31) that is generated only when the counter is at zero (i.e., at least one count threshold) and therefore indicates the result of the comparison. Therefore, Sullivan anticipates all elements of Claim 3.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Ramnandan Singh whose telephone number is 703-308-6270. The examiner can normally be reached on Monday through Friday between 8:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forrester Isen can be reached on 703-305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

ds

May 2, 2003

  
FORESTER W. ISEN  
SUPERVISORY PATENT EXAMINER  
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